



## **Practical 10**

Aim: To perform basic PL/SQL blocks

1. Write a PL-SQL block for checking weather a given year is a Leap year or not.

```
Query:
DECLARE
 year NUMBER := 2004;
BEGIN
 IF MOD(year, 4)=0
   AND
   MOD(year, 100)!=0
   OR
   MOD(year, 400)=0 THEN
   dbms output.Put line(year || ' is a leap year ');
 ELSE
   dbms output.Put line(year | ' is not a leap year.');
 END IF:
END;
Output:
 User: 22DCE006
Home > SQL > SQL Commands
  ✓ Autocommit Display 10
 DECLARE
    year NUMBER := 2004;
 BEGIN
    IF MOD(year, 4)=0
       AND
       MOD(year, 100)!=0
       MOD(year, 400)=0 THEN
       dbms_output.Put_line(year || ' is a leap year ');
       dbms_output.Put_line(year || ' is not a leap year.');
    END IF;
 END;
  Results Explain Describe Saved SQL History
 2004 is a leap year
```

2. Find out whether given string is palindrome or not using for a while and simple loop.

```
Using For Loop
```

Statement processed.

```
Query:
DECLARE
input_string VARCHAR2(100) := 'naman';
is_palindrome BOOLEAN := TRUE;
BEGIN
FOR i IN 1..LENGTH(input_string)
```





```
LOOP
  IF SUBSTR(input string, i, 1) != SUBSTR(input string, LENGTH(input string) - i
+ 1, 1) THEN
   is palindrome := FALSE;
   EXIT:
  END IF;
 END LOOP;
 IF is palindrome THEN
  DBMS OUTPUT.PUT LINE(input string || ' - The given string is a palindrome.');
 ELSE
  DBMS OUTPUT.PUT LINE(input string || ' - The given string is not a
palindrome.');
 END IF;
END;
Output:
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 ✓ Autocommit Display 10
  input_string VARCHAR2(100) := 'naman';
  is_palindrome BOOLEAN := TRUE;
  FOR i IN 1..LENGTH(input_string)
   IF SUBSTR(input_string, i, 1) != SUBSTR(input_string, LENGTH(input_string) - i + 1, 1) THEN
     is_palindrome := FALSE;
    END IF;
  END LOOP;
  IF is_palindrome THEN
   DBMS_OUTPUT.PUT_LINE(input_string || ' - The given string is a palindrome.');
   DBMS_OUTPUT.PUT_LINE(input_string || ' - The given string is not a palindrome.');
  END IF;
 END;
 Results Explain Describe Saved SQL History
naman - The given string is a palindrome.
Statement processed.
Using While Loop
Query:
DECLARE
 input string VARCHAR2(100) := 'naman';
 is palindrome BOOLEAN := TRUE;
 i NUMBER := 1;
BEGIN
 WHILE i <= LENGTH(input string)
 LOOP
  IF SUBSTR(input string, i, 1) != SUBSTR(input string, LENGTH(input string) - i
+ 1, 1) THEN
   is palindrome := FALSE;
   EXIT;
  END IF;
```





```
i := i + 1;

END LOOP;

IF is_palindrome THEN

DBMS_OUTPUT.PUT_LINE(input_string||' - The given string is a palindrome.');

ELSE

DBMS_OUTPUT.PUT_LINE(input_string||' - The given string is not a palindrome.');

END IF;

END;

Output:

User 22DCE006
```

```
Home > SQL > SQL Commands
 ✓ Autocommit Display 10
  input_string VARCHAR2(100) := 'naman';
  is_palindrome BOOLEAN := TRUE;
  i NUMBER := 1;
  WHILE i <= LENGTH(input_string)
    IF SUBSTR(input_string, i, 1) != SUBSTR(input_string, LENGTH(input_string) - i + 1, 1) THEN
      is_palindrome := FALSE;
      EXIT;
    END IF;
    i := i + 1;
  END LOOP;
  IF is_palindrome THEN
    DBMS_OUTPUT.PUT_LINE(input_string||' - The given string is a palindrome.');
  ELSE
    DBMS_OUTPUT.PUT_LINE(input_string||' - |The given string is not a palindrome.');
  END IF;
 END;
 Results Explain Describe Saved SQL History
```

naman - The given string is a palindrome.
Statement processed.

**Conclusion:** From this practical I learned about basic pl/sql functions and use of loops.

**Staff Signature:** 

Grade:

**Remarks by the Staff:**